CLAIMS

1. An isolated nucleic acid molecule comprising a polynucleotide selected from the group consisting of:

(a) a polynucleotide encoding amino acids from about 1 to about 373 of SEQ ID NO:2;

(b) a polynucleotide encoding amino acids from about 2 to about 373 of SEQ ID NO:2;

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(c) a polynucleotide encoding amino acids from about 1 to about 197 and about 236 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond;

(d) a polynucleotide encoding amino acids from about 1 to about 288 and about 336 to about 373 of SEQ ID NO:2, wherein amino acids about 288 and about 336 are joined by a peptide bond;

(e) a polynucleotide encoding amino acids from about 1 to about 197, amino acids about 236 to about 288, and amino acids about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond, and said amino acids about 288 and about 336 are joined by a peptide bond.

(f) a polynucleotide encoding amino acids from about 198 to about 235 of SEQ ID NO:2;

(g) a polynucleotide encoding amino acids from about 1 to about 187 of SEQ ID NO:2;

(h) a polynucleotide encoding amino acids from about 2 to about 187 of SEQ ID NO:2;

(i) a polynucleotide encoding amino acids from about 1 to about 198 of SEQ ID NO:2;

(j) the polynucleotide deposited as ATCC Accession No. PTA 89;

(k) a polynucleotide at least 80% identical to any one of the polynucleotides of (a)-(j);

(l) the polynucleotide complement of the polynucleotide of any one of the polynucleotides of (a)-(j).

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2. An isolated nucleic acid molecule comprising at least 10 contiguous nucleotides from the coding region of SEQ ID NO:1.

3. The isolated nucleic acid molecule of claim 2, which comprises at least 20 contiguous nucleotides from the coding region of SEQ ID NO:1.

4. The isolated nucleic acid molecule of claim 2, which comprises at least 50 contiguous nucleotides from the coding region of SEQ ID NO:1.

5. An isolated nucleic acid molecule comprising a polynucleotide encoding a polypeptide wherein, except for at least one conservative amino acid substitution, said polypeptide has an amino acid sequence selected from the group consisting of:

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(a) amino acids from about 1 to about 373 of SEQ ID NO:2;

(b) amino acids from about 2 to about 373 of SEQ ID NO:2;

(c) amino acids from about 1 to about 197 and about 236 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond;

(d) amino acids from about 1 to about 288 and about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 288 and about 336 are joined by a peptide bond;

(e) amino acids from about 1 to about 197, amino acids about 236 to about 288, and amino acids about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond, and said amino acids about 288 and about 336 are joined by a peptide bond.

(f) amino acids from about 198 to about 235 of SEQ ID NO:2;

(g) amino acids from about 1 to about 187 of SEQ ID NO:2;

(h) amino acids from about 2 to about 187 of SEQ ID NO:2; and

(i) amino acids from about 1 to about 198 of SEQ ID NO:2.

6. A method of making a recombinant vector comprising inserting a nucleic acid molecule of claim 1 into a vector in operable linkage to a promoter.

7. A recombinant vector produced by the method of claim 6.

8. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 7 into said host cell.

9. A recombinant host cell produced by the method of claim 8.

10. A recombinant method of producing a polypeptide, comprising culturing the recombinant host cell of claim 9 under conditions such that said polypeptide is expressed and recovering said polypeptide.

11. An isolated polypeptide comprising amino acids at least 90% identical to amino acids selected from the group consisting of:

(a) amino acids from about 1 to about 373 of SEQ ID NO:2;

(b) amino acids from about 2 to about 373 of SEQ ID NO:2;

(c) amino acids from about 1 to about 197 and about 236 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond;

(d) amino acids from about 1 to about 288 and about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 288 and about 336 are joined by a peptide bond;

(e) amino acids from about 1 to about 197, amino acids about 236 to about 288, and amino acids about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond, and said amino acids about 288 and about 336 are joined by a peptide bond.

(f) amino acids from about 198 to about 235 of SEQ ID NO:2;

(g) amino acids from about 1 to about 187 of SEQ ID NO:2;

(h) amino acids from about 2 to about 187 of SEQ ID NO:2; and

(i) amino acids from about 1 to about 198 of SEQ ID NO:2.

12. An isolated polypeptide wherein, except for at least one conservative amino acid substitution, said polypeptide has an amino acid sequence selected from the group consisting of:

(a) amino acids from about 1 to about 373 of SEQ ID NO:2;

(b) amino acids from about 2 to about 373 of SEQ ID NO:2;

(c) amino acids from about 1 to about 197 and about 236 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond;

(d) amino acids from about 1 to about 288 and about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 288 and about 336 are joined by a peptide bond;

(e) amino acids from about 1 to about 197, amino acids about 236 to about 288, and amino acids about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond, and said amino acids about 288 and about 336 are joined by a peptide bond.

(f) amino acids from about 198 to about 235 of SEQ ID NO:2;

(g) amino acids from about 1 to about 187 of SEQ ID NO:2;

(h) amino acids from about 2 to about 187 of SEQ ID NO:2; and

(i) amino acids from about 1 to about 198 of SEQ ID NO:2.

13. An isolated polypeptide comprising amino acids selected from the group consisting of:

(a) amino acids from about 1 to about 373 of SEQ ID NO:2;

(b) amino acids from about 2 to about 373 of SEQ ID NO:2;

(c) amino acids from about 1 to about 197 and about 236 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond;

(d) amino acids from about 1 to about 288 and about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 288 and about 336 are joined by a peptide bond;

(e) amino acids from about 1 to about 197, amino acids about 236 to about 288, and amino acids about 336 to about 373 of SEQ ID NO:2, wherein said amino acids about 197 and about 236 are joined by a peptide bond, and said amino acids about 288 and about 336 are joined by a peptide bond.

(f) amino acids from about 198 to about 235 of SEQ ID NO:2;

(g) amino acids from about 1 to about 187 of SEQ ID NO:2;

(h) amino acids from about 2 to about 187 of SEQ ID NO:2; and

(i) amino acids from about 1 to about 198 of SEQ ID NO:2.

14. An epitope-bearing portion of the polypeptide of SEQ ID NO:2.

15. The epitope-bearing portion of claim 14, which comprises 10 contiguous amino acids of SEQ ID NO:2.

16. The epitope-bearing portion of claim 14, which comprises 20 contiguous amino acids of SEQ ID NO:2.

17. An isolated antibody that specifically binds to the polypeptide of claim 11.

18. An isolated antibody that specifically binds to the polypeptide of claim 12.

19. An isolated antibody that specifically binds to the polypeptide of claim 13.

20. A composition comprising a polypeptide of claim 11 and a pharmaceutically acceptable carrier.

21. A composition comprising a polypeptide of claim 12, and a pharmaceutically acceptable carrier.

22. A composition comprising a polypeptide of claim 13, and a pharmaceutically acceptable carrier.

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23. A method of inhibiting cell growth, said method comprising transfecting said cell with a polynucleotide, wherein said polynucleotide is the complement of a mRNA molecule encoding SEQ ID NO:2, and said polynucleotide is between about 8 and 50 nucleotides in length.

24. The method of claim 23, wherein said polynucleotide is between about 15 and 25 nucleotides in length.

25. The method of claim 23, wherein said polynucleotide is selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6.

26. A method of decreasing the activity of Nogo B in a cell, said method comprising phosphorylating Nogo B.

27. The method of claim 26, wherein said phosphorylation results from activation of p38.

28. A method of inhibiting the activity of Nogo B in a cell, said method comprising treating said cell with an antisense oligonucleotide wherein said antisense oligonucleotide hybridizes with a polynucleotide encoding Nogo B.

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29. A method of inhibiting the activity of Nogo B in a cell, said method comprising treating said cell with a ribozyme capable of cleaving mRNA encoding said Nogo B.

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